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REMARKS

Applicants have filed this Response in reply to the outstanding Official Action of January 16, 2007 and Applicants believe that this Response is fully responsive thereto for at least the reasons set forth herein.

In the outstanding Official Action, the Examiner rejected Claims 18-28 under 35 U.S.C. § 103 (a) as being unpatentable over Takahashi in view of Ebling et al., U.S. Patent No. 5,569,161 (hereinafter "Ebling"). Takahashi was previously cited.

Applicants respectfully disagree with the rejections and traverse with at least the following analysis. Applicants submit that the hypothetically combined references fail to teach that a bellows is used to connect the optical system and the imaging system and allows for relative movement. In other words, the references do not disclose a bellows portion between the optical system and the imaging system. Additionally, the references fail to teach any means for airtightly joining the imaging system and the optical system as claimed.

In Takahashi, Figure 10 depicts a tubular member surrounding the optical system. The optical system is fixed to the tubular member. However, the imaging system (2a and 2b) is not attached to the tubular member. Figure 10 does not depict any structure that either is capable of keeping airtightness or permitting relative movement of the image section and optical system in a plurality of directions. Figure 10 clearly illustrates that the imaging section and the optical section are not connected. The tubular member, therefore, does not airtightly join the imaging system with the optical system. Figure 10 also does not depict that the tubular member allows for relative movement in a plurality of directions. Additionally, there is no suggestion to connect the optical system with the imaging system using a tubular member.

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Moreover, the imaging system would not move if the tubular member moves since the imaging elements are not fixed to the tubular member.

Ebling fails to cure these deficiencies. Although Ebling teaches a bellows portions, the bellows portion does not connect the image system and the optical system. Additionally, the bellows portion is not used for the claimed function. Therefore, Ebling is fundamentally different from the claimed invention.

Ebling describes an endoscope having an eyepiece end 16 connected to a fiber optic image bundle 14. The eyepiece appears to be directly connected to the fiber optic image bundle. The image bundle is insertable into a separate sterile sleeve such that the fiber need not be sterilized prior to use. The image bundle in the sleeve forms a winder proximate to the distal end of the sleeve to facilitate viewing through the fiber optic bundle. The purpose of the bellows portion is to urge the fiber optic image bundle into abutment with the window to facilitate alignment of the distal end of the bundle with the window. *See Abstract.*

Ebling states that the bellows 60 is positioned near the proximal end of the sleeve 24 and is stretched slightly so as to apply a contractile force which urges or pulls the sleeve 24 proximally, so as to maintain the distal end of the fiber optic image bundle 14 in abutment or intimate contact with the window 38 formed at the distal tip of the sleeve 24. The bellows 60 may be located at various different locations relative to or along the sleeve 24. *See Col. 8, lines 5-17. See also, lines 18-30.*

In other words, the bellows portion is connected to the sleeve. Figure 11 illustrates that one end of the bellows portion is attached to element 16, the eyepiece, and the other end is attached to a connector and the sleeve. The sleeve is not the imaging system.

The bellows portion acts as a biasing means to insure that the image bundle abuts the window, e.g., merely used as an expansion and shrinkage means in the direction of the optical axis.

Clearly, the bellows portion is not attached to the imaging element and the optical system nor is the bellows portion located between the imaging element and the optical system. In contrast, Figure 2 of the instant application illustrates that the bellows portion is located between the optical unit 14 and the imaging unit 12.

Additionally, given the configuration and location of the bellows portion in Ebling, the bellows portion does not expand or contract to maintain the airtight seal in response to relative movements of the optical system support member and the imaging system support member. Thus, Ebling does not describe a connection for allowing relative movement in a plurality of directions with respect to the optical and image system.

Accordingly, the hypothetical combination of Takahashi and Ebling, whether taken alone or in any combination thereof, fails to disclose a connection between the image system and the optical system that permits relative movement in a plurality of directions and also airtightly seals the components as claimed.

The claimed invention has a significant advantage over the prior art combination.

Specifically, the claimed invention includes a tubular member comprising a first end and a second end; the tubular member defining an inner space extending there through and between the first end and the second end, the optical system being hermetically joined to the first end and the **imaging element being hermetically joined to the second end thereby airtightly sealing the inner space**, the tubular member further comprising a bellows

portion for expanding and contracting in at least a direction along an optical axis of the optical system to maintain the airtight seal of the inner space in response to relative movements of the optical system support member and the imaging element support member in a direction along an optical axis of the optical system and in a direction perpendicular to the optical axis of the optical system, as recited in Claim 18.

The claimed invention makes it possible to change the positional relationship between the imaging optical unit 14 and the imaging element unit 12. The bellows portion both maintains an airtight seal and allows for relative motion in the optical axis, direction of de-centering, and tilt directions.

Accordingly, the cited references fail to teach, suggest or render obvious, each and every feature of Claim 18.

Claims 19-28 are patentably distinct from the cited references at least based upon the reasons set forth above in view of their dependency, whether directly or indirectly, from independent Claim 18.

In the outstanding Official Action, Claims 29-35 stand rejected under 35 U.S.C. § 103 (a), as being unpatentable over Takahashi in view of Ebling and in view of MacKinnon. MacKinnon was previously cited.


MacKinnon does not cure any of the aforementioned deficiencies.

Accordingly, Claims 29-35 are patentably distinct from the cited references at least based upon the reasons set forth above in view of their dependency, whether directly or indirectly, from independent Claim 18.

Based upon the foregoing, Applicants respectfully request that the Examiner withdraw the rejection of Claims 18-35 pursuant to 35 U.S.C. § 103(a).

In conclusion, the Applicants believe that the above-identified application is in condition for allowance and henceforth respectfully solicits the Examiner to allow the application. If the Examiner believes a telephone conference might expedite the allowance of this application, the Applicants respectfully request that the Examiner call the undersigned, Applicants' attorney, at the following telephone number: (516) 742-4343.

Respectfully submitted,

  
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